

## SCREEN FOR SODIUM CHANNEL MODULATORS

### Abstract of the Disclosure

[0073] A method or screen for assessing the potential of a compound to treat a pathological condition, such as arrhythmia, which is manifested by an increased late sodium current in a heart is disclosed. The method employs a mutant sodium channel protein having an amino acid sequence in which one or more amino acids among the ten amino acids occurring at the carboxy end of the S6 segments of D1, D2, D3 or D4 domains of mammalian Nav1 differs from the amino acid in wild-type Nav1 by substitution with tryptophan, phenylalanine, tyrosine or cysteine. Cells transfected with a nucleic acid that encodes a mutant mammalian Nav1 protein, as well as isolated nucleic acid comprising a nucleotide sequence that codes for a mutant mammalian Nav1 protein are disclosed.